

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

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BITVESTMENT PARTNERS, LLC,

Plaintiff,

-against-

COINLAB, INC, CLI HOLDINGS, INC., ALYDIAN
INC., PETER VESSENES and JOHN DOE,

Defendants.
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13-civ-7632

Declaration of Hans Olsen

1. My name is Hans Olsen, I am over 18 years of age and testify hereto based upon my personal knowledge.

2. Since May 2013, I have been managing engineering and operational activities at CLI Holdings, Inc., doing business as Alydian, Inc. ("Alydian"), which is in the business of designing, manufacturing and deploying bitcoin mining "rigs" for the purpose of mining bitcoins. I started my engagement with Coinlab in November of 2012 as a consultant providing consultation on activities related to ASIC development and manufacturing. During the early part of 2013 my involvement gradually increased ultimately taking on a full time role in May.

3. A copy of my CV is attached hereto as Exhibit A. Over a 30 year period I have served as CEO, President, Board Member and other executive capacities of semiconductor chip manufacturing companies.

Bitcoin Mining Operations

4. A mining “rig” is a dedicated and highly specialized computer system used for mining bitcoins. Rather than a standard computer system that performs general purpose computing algorithms, a bitcoin mining rig performs a dedicated algorithm to solve a complex mathematical calculation.

5. As bitcoins have increased in value, more mining rigs have been deployed to mine bitcoins. The bitcoin mining network automatically adjusts so that the same number of bitcoins are awarded each day, but the competition makes mining bitcoins increasingly difficult. Early rigs used standard GPU devices that were designed for high performance PC graphics applications. However, these devices were ineffective and toward the end of 2012 there were a growing trend to develop custom IC devices – or ASIC’s – to perform the calculations necessary for bitcoin mining operations. The speed of the bitcoin mining operation is measured in “terra hashes” or “TH.”

Alydian’s Bitcoin Mining Business Model

6. Like others, Alydian decided toward the end of 2012 to develop mining rigs. After several months of preliminary analysis and study of the Bitcoin mining opportunities, Alydian formally started its effort beginning of October 2012. The Company hired Brad Martin, a highly experienced engineer with background from Silicon Labs and Motorola to lead its effort in establishing a bitcoin mining project.

7. Originally the project management and development, led by Brad, was based in Austin, TX. Brad was the sole employee, but he engaged with several contractors to undertake the development effort. The initial effort was focused on developing architecture specification for the over-all mining system, analysis of the trade-

off with various “mining chip” architectures and definitions, creating budget and plans for project staffing.

8. Alydian’s market strategy was to design, manufacture and host bitcoin mining rigs. The predominant market strategy for bitcoin mining enterprises was to sell bitcoin mining rigs to customers, who would operate the rigs on their own.

9. Alydian wanted to implement a different approach. Rather than physically ship the mining rigs to individuals, Alydian decided to develop a large scale mining operation that would consist of large “server” size installations housed in data centers. Customers could then buy and own the bitcoins mined by Alydian without the need to operate the rigs on their own.

10. One of the challenges of Alydian’s business model is the high expense of operating bitcoin mining rigs. Even smaller mining rigs require large amount of power and cooling and are therefore not desirable to operate in a home or standard office environment. As such, being able to own rigs or capacity in a data center eliminates the need for the individual to take on additional utility expenses. Alydian believed that this was a business opportunity if it could secure the funding to host and operate the rigs in data centers.

11. As a result of Alydian’s business strategy, the system development became more complex compared to the much less complex mining rigs that were simply shipped to customers.

12. The Coinlab development project consisted of 3 major development phases.

a. Development of custom ASIC device (designated “Leaf”)

- b. Development of server system elements (i) hardware elements: system PCB/power conditioning rack infrastructure (ii) system software development (iii) thermal management and cooling infrastructure.
- c. Creation of an installation(s) to house the large bitcoin server equipment – or alternatively find suitable data centers where the servers could be co-located.

13. A preliminary project plan and budget were established in December of 2012. A very significant decision was the development plan for the ASIC device and several options were considered. All of this occurred prior to my arrival at Alydian.

14. I was originally contracted to advise and assist Brad in the selection of the manufacturing process and manufacturing partner for the ASIC device. The original plan for the ASIC device was to use a very mature manufacturing process known as “110nm node” and it was expected that the first prototype of this “Leaf” device could be available in February/March 2013 timeframe.

15. However, in January it was deemed that this technology node might not be competitive with other solutions believed to be under development by competitors and instead it was decided to use a more advanced 65nm node for the Leaf device. While this process node was considerably more expensive than the 110nm node, the overall system advantages – cost and performance - were more compelling.

Expenses and complexity were greater than projected

16. It became apparent, however, that the costs of launching bitcoin mining operations was greater than anticipated. The major cost elements in establishing a “server” size mining operations are

- a. the cost of developing the ASIC device
- b. the cost of developing the server system
- c. the cost of building the servers
- d. the cost of operating the server equipment in the data centers
- e. the cost of developing the ASIC device typically consist of
- f. (engineering development time” – 2 to 3 month for 110nm node (3 engineers)/4 to 6 month for 65nm node (6 engineers)/ 6-8 month for 28 nm node (10 engineers)
- g. tooling cost for the device
 - i. -\$250K for 110nm
 - ii. -\$750K for 65nm
 - iii. -\$3M-\$4M for 28nm
- h. the development of server system
 - i. 4-6 month for 2-3 engineers
 - ii. tooling costs - \$200K

17. The capital/inventory cost to build systems are commonly expressed in the bitcoin industry as a \$/TH – the cost to enable a certain processing capacity (TH). The planned cost for Coinlab was about \$6K-\$8K /TH.

18. Furthermore, the cost to deploy a system in a data center consists of two categories of expenses

- a. In many cases a one-time non-recurring charge to facilitate and install adequate cooling and power. This cost can vary widely depending on the provider and the cost of power. Typical cost is around \$2,000/TH.

- b. Monthly operating cost for Alydian was approximately \$1,000/TH

19. An additional complexity with co-locating in data center is the term of the lease. Typical lease terms in a hosting facility is 3-5 years. For bitcoin operations the need for hosting is typically less than a year and ideally month to month leases are desirable. Alydian has been successful in obtaining month-to-month lease terms for the majority of its deployments at a greater monthly expense.

Alydian's Business Operations Became Impracticable and Unprofitable

20. Due to the unexpected expenses and exponential increases in the speed of the bitcoin mining network, Alydian's business model was strained. In approximately April 2013, it became increasingly clear that the original project plan could not be met.

21. Alydian faced numerous business challenges.

- a. The ASIC development was significantly delayed and new design tools had to be adapted. Consequently a service company had to be contracted in Shanghai which caused further delay.
- b. Development of the system main processor boards and system design had to be re-scoped and consequently further delays resulted.

22. As the Alydian schedule was further extended to August or September the need for additional funding became a higher priority. During this same time (early May 2013), Brad Martin decided to leave the company and I was asked to step in and manage the project.

23. I subsequently agreed to restructure the development effort, hired Robert Batten in June and formed a system design team in Portland and moved all Alydian activities from Austin to Portland. While the Leaf ASIC device had been completed,

major parts of the system design still had to be done and what was done basically had to be re-done. This transition and design changes caused a further delay of launching bitcoin mining rigs.

24. The effort progressed – in July we received first prototypes of Leaf device. In early august we validated the system PCB design. The deployment plan was assumed to start in August and ramp thru September and be complete in early October.

25. While it was always contemplated that new capital would be required to complete the project and deployment, it became urgent in late June and July as we needed to start ramp for production builds and deployment.

26. In July it also became increasingly clear that the bitcoin mining network speed was accelerating exponentially. We saw an increasing number of mining companies introducing 45nm node technology and several companies announcing 28nm node device availability in Q3 and Q4 2013. Alydian's rigs operated on a 65 nm node technology and could not compete with 45 nm technology or 28 nm technology.

27. In August 2013, I personally met with Dan Gallancy regarding his due diligence of Alydian's chip mining operations. I disclosed to Dan the difficulties facing Alydian and the need for additional capital to reach the market before Alydian's bitcoin mining rigs were no longer current with the requirements of mining on the bitcoin network. Dan understood these risks and performed extensive due diligence on Alydian's finances, technology and business model. Dan had been engaged as an expert in Due Diligence by a potential capital investor, Cedar Hill Capital and was granted full access to Alydian's business operations.

28. This combination of market factors outside of Alydian's control prompted Alydian to attempt to accelerate development in an attempt to get to market faster. As a result, we incurred incremental expenses by doing fast turns on engineering and production builds. In many cases we had to pay very high expedite fees for acceleration of cycle time. Further, our cash availability/capital structure restricted us to from obtaining trade credit and we had no ability to negotiate for lower cost. In fact we had to re-engineer the system PCB to accommodate components available in supplier inventory at additional cost.

29. During the month of September the network speed unexpectedly continued the exponential growth and it became increasingly clear that our 65 nm technology node based systems would become obsolete much faster than anticipated just 30 days earlier.

30. In fact by early October it was evident that unless mining rigs were based on 28 nm node technology it would be difficult to obtain any return on bitcoin mining.

31. During the month of September we concluded that we would target deployment of 380 TH of mining capacity, but we were increasingly considering whether we should limit deployment to 220 TH given the potential low returns.

32. Among the considerations for the 380 TH deployment was the availability of Leaf device manufactured by SMIC (our chip contract manufacturing partner) in China. In order to meet our desired schedule we tried – unsuccessfully – to convince SMIC to manufacture the devices on a highly accelerated basis.

33. Finally in early October we decided to only deploy 220 TH based on the exponential growth of the network and the expected poor return on the incremental 160 TH.

34. Alydian, from time to time, considered whether to fund a “second” generation” Leaf devices based on 28 nm node. We concluded that it would be too high risk with limited return based on time to market demands and the high capital requirement. Instead we have focused on developing industry partnerships that could provide a higher return potential, but with the unabated exponential growth in the market we are no longer pursuing this. At this point we believe that even 28nm node based systems introduced in Q1 2014 may not be providing reasonable returns.

35. Currently we estimate Alydian’s costs to date to be approximately \$2M in development and operating costs and about \$2M for inventory and build costs. Of this the development cost for the IC and hardware are in line with expectation around \$800K with salaries and contractors about \$700K for a total development cost of \$1.5M.

36. To date we have made the following deployment of bitcoin mining rigs (or “systems”)

- | | |
|----------|-----------|
| a. 9/4 | 1 system |
| b. 9/18 | 2 systems |
| c. 9/27 | 1 system |
| d. 10/17 | 2 systems |
| e. 11/1 | 4 systems |
| f. 11/8 | 3 systems |

- g. A system generates approximately 5.6 TH at maximum performance. A system may not operate at maximum performance at all times.
- h. To date we mined the following Bitcoins:
 - i. August 14.78577426
 - ii. September 884.83728327
 - iii. October 1,656.66530240
 - iv. November MTD 485.06368180
 - v. For a total of 3,041.35204173 Bitcoins.
- i. The costs of deploying the Alydian systems has exceeded the value of the Bitcoins mined and, due to the increase in the Bitcoin mining network, Alydian's business did not pencil to a positive cash flow.

Estimated costs to develop a second generation 28nm based system

37. Estimated costs to develop a second generation 28nm node platform range from \$4M to \$6M.
- a. ASIC development costs for 28nm node vary from \$3M-\$4M.
 - b. Engineering and engineering tools cost range from \$1M-\$2M.

Current situation

38. Because of the inability to create a positive cash flow from a bitcoin mining operation or devise a business model that would result in positive cash flow from bitcoin mining in the future, Alydian entered Chapter 11 bankruptcy for the protection of its creditors.

I declare under the penalty of perjury that the foregoing is true and correct.

Dated: November 14, 2013

A handwritten signature in black ink, appearing to read 'Hans Olsen', written over a horizontal line.

Hans Olsen

EXHIBIT A – OLSEN C.V.

HANS H. OLSEN

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Profile

- 35 years of successful high technology management experience in the consumer, computer and semiconductor industry.
 - Extensive executive experience as CEO/COO/VP with both public and private companies understanding how to grow and operate technology aggressive organizations.
 - Since 2008 focused on executive management roles leading organizations in early growth stages or restructuring efforts. Specialized in Business Planning, Operations, Engineering and Supply Chain Management as well as Organizational Development.
 - Held several BOD member and Corporate Advisory positions.
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- Demonstrated strong ability to developing teams, build organizations, focus resources and produce results and success.
 - Provided executive leadership for complex technology developments across multiple geographies and cultures.
 - Unique background, combining a technical foundation with a solid business orientation with a keen awareness of budget/resource constraints.
 - Executive characteristics of creative, collaborative, high energy with excellent interpersonal skills and leadership ability. Competitive, yet caring and flexible to be effective and generate favorable results. Informed and concise decision maker.

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Corporate experience

Avnera Corporation (Portland, OR)

(\$20M annual revenue, 70 employees)

2011 – Dec 2012 Vice President, Finished Goods Products

Initially returned to Avnera as Executive consultant to assist with creation of new business group. Since August 2011 leading the development efforts for the business group, developing "white box" audio products for consumer brands. Responsible for a wide range of functions including Business Planning, Product Development, Manufacturing Engineering, CM and SCM activities. Recently left after successful launch of initial products and transition of leadership.

Trident Microsystems (San Jose, CA)

Dec 2010 – May 2011 Sr. Vice President, Operations

\$500M Fabless semiconductor Company and leader in TV and STB SOC business. Hired 2010 to lead restructuring and integration effort of worldwide Operations organization. Restructured and transitioned leadership from European based to Taiwan based organization. Completed assignment May 2011.

Avnera Corporation (Portland, OR)

2010 Executive advisor / Vice President Operations

SOC semiconductor Company and leader in the wireless audio and audio amplification business. Initially hired as Executive consultant to the CEO, in April 2010 assumed interim executive responsibility for establishing and scaling Operations to meet business growth.

Azuray Technologies (Portland, OR)

2009 Executive BOD member / interim CEO

Azuray (aka as Wi-Chi), a VC funded early stage company developing innovative Digital Power Conditioning and Communication Control Solutions for Solar PV applications. Started as BOD member at inception of Company in June 2008, later assumed Executive position as part of management realignment.

Pixelworks Inc. (Portland, OR & San Jose, CA)

(PXLW, \$175M annual revenue, 500 employees)

2007 - 2008	CEO and President
2002 - 2006	Executive Vice President and COO
1998 - 2001	Vice President Operations

Instrumental in the development and growth of very successful global Video and TV SOC consumer based business. Reached IPO in 2 years from series A VC funding and expanded the Company from a Portland based to a Global based organization while growing the organization to over 500 employees.

Part of start-up executive team with responsibilities for operations and back-end engineering. Assumed formal COO responsibility after successful IPO in 2000 and was named CEO in Dec.2006 to lead restructuring effort and position Company for restart.

Resigned March 2008 after successful completion of turn around in 2007. Remained BOD member through May 2009.

- ♦ As CEO lead major restructuring of the worldwide organization and business strategy. Established new, focused corporate strategy, re-aligned product strategy and re-positioning the company for restart and profitable operations around core competencies.
- ♦ As COO lead the organization through major growth period, successfully building worldwide company infrastructure and business processes achieving \$200M annual run rate.

[Type text]

- ♦ As VP Operations successfully build operations organization, sourced engineering third party IP, and developed key foundry relationships. Successfully managed revenue growth from 0 to \$50M culminating in successful IPO in May 2000

Trident Microsystems (Mountain View, CA)

(TRID, \$125M annual revenue, 350 employees)

1997 - 1998 Vice President Product Marketing and Applications Engineering

Responsible for PC Graphics Chip Set Product Marketing and Applications Engineering.

NewLogic, (aka IChips Corp. Vancouver, WA)

(Company acquired by Paradigm Technologies in 1996)

1993 - 1997 Founder and CEO

Creatively founded IChips (aka NewLogic) with technology spun-out of EDI to pursue business based on highly integrated PC chip set for the Pentium processor.

In 1996, completed sale of NewLogic to Paradigm Technologies, a San Jose, CA based memory chip Company.

Electronic Designs Inc. (Hopkinton, MA)

(EDIX, \$80M annual revenue, 130 employees)

1985 - 1993 CEO and President.

1983 - 1984 Vice President Operations and Marketing.

Co-founder of Electronic Designs Inc (EDI) in 1983. EDI initially developed very successful memory add-in board and module technology based business for the mini-computer and PC markets. Subsequently established EDI as a leading memory system supplier in the Military market. Pioneered several innovative product concepts and business models.

Prior to moving to the United States in 1983, held various senior management positions in Engineering and Supply Chain Management at Christian Rovsing (**CRAS**), a Danish minicomputer Company, and **Elektronik Centralen**, a Technology Research Center, both located in Copenhagen.

Education

1975 Electronic Engineering degree, Copenhagen Technical University